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S&H Form: (02/05)

<b>APPEAL BRIEF FEE TRANSMITTAL</b>	Attorney Docket No.	1293.1291	
	Application Number	10/024,716	
	Filing Date	December 21, 2001	
	First Named Inventor	Chang-hyun CHO	
	Group Art Unit	2633	
AMOUNT ENCLOSED	\$950.00	Examiner Name	Daquan Zhao

**FEE CALCULATION (fees effective 12/08/04)**

CLAIMS AS AMENDED	Claims Remaining After Amendment	Highest Number Previously Paid For	Number Extra	Rate	Calculations
TOTAL CLAIMS		- =	0	X \$ 50.00 =	\$ 0.00
INDEPENDENT CLAIMS		- =	0	X \$ 200.00 =	0.00
Since an Official Action set an <u>original</u> due date of <u>March 19, 2007</u> , a three-month extension of time extension of time is filed herewith, with fees of:					450
If Appeal Brief is enclosed, add (\$500.00)					500.00
If Statutory Disclaimer under Rule 20(d) is enclosed, add fee (\$130.00)					
Information Disclosure Statement (Rule 1.17(p)) (\$180.00)					
Total of above Calculations =					\$ 950.00
Reduction by 50% for filing by small entity (37 CFR 1.9, 1.27 & 1.28)					
<b>TOTAL FEES DUE =</b>					<b>\$ 950.00</b>
(1) If entry (1) is less than entry (2), entry (3) is "0". (2) If entry (2) is less than 20, change entry (2) to "20". (4) If entry (4) is less than entry (5), entry (6) is "0". (5) If entry (5) is less than 3, change entry (5) to "3".					

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| Deposit Account No.  | 19-3935            |
| Deposit Account Name | STAAS & HALSEY LLP |
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SUBMITTED BY: STAAS & HALSEY LLP

Typed Name	Stephen T. Boughtner	Reg. No.	45,317
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Attorney Docket No. 1293.1291

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Chang-hyung CHO

Application No.: 10/024,716

Group Art Unit: 2633

Filed: December 21, 2001

Examiner: Daquan Zhao

For: METHOD AND APPARATUS FOR RECORDING AND SEARCHING AN AUDIO/VIDEO  
SIGNAL

**APPEAL BRIEF**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Final Office Action in the above-identified application, and pursuant to the Notice of Appeal filed January 19, 2007, Applicants submit this Appeal Brief having a due date of March 19, 2007 together with the requisite fee set forth in § 37 C.F.R. §41.20. A Petition for a two-month extension of time, together with the requisite fee for same, is submitted herewith, thereby extending the period for filing the Appeal Brief to May 19, 2007.

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02 FC:1252

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**I. REAL PARTY IN INTEREST (37 CFR § 41.37(c)(1)(i))**

The real party in interest is Samsung Electronics Co., Ltd., the assignee of the subject application.

**II. RELATED APPEALS AND INTERFERENCES (37 CFR § 41.37(c)(1)(ii))**

Appellant, Appellants' legal representatives, and assignee are not aware of any prior or pending appeals or interferences which directly affect or are directly affected by, or have a bearing, on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS (37 CFR § 41.37(c)(1)(iii))**

Claims 1-4, 6, 7, 10, 11, 13-22, 24-29, 31 and 33 are currently pending and claims 5, 8, 9, 12, 23, 30 and 32 remain cancelled. Claims 1-4, 6, 7, 10, 11, 13-22, 24-29, 31 and 33 stand finally rejected and are appealed.

Claims 1-4, 6, 7, 10, 11, 13-22, 24-29, 31 and 33 are each independently patentable over the references, and as set forth below, and do not stand or fall together.

**IV. STATUS OF AMENDMENTS (37 CFR § 41.37(c)(1)(iv))**

All amendments filed have been entered, and no amendments have been filed since the final Office Action mailed October 19, 2006.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER (37 CFR § 41.37(c)(1)(v))**

Pursuant to 37 C.F.R. §1.192(c)(5), the presently claimed invention is directed to

Independent claim 1 recites: A method of recording an audio/video (A/V) signal,(e.g. as in paragraph [0002]) comprising: selecting a category item for the A/V signal (e.g. as in paragraph [0009]); storing category information about the A/V signal(e.g. as in paragraph [0009]), the category information including the category item(e.g. as in paragraph [0014]; determining a compression ratio for the A/V signal according to the category item selected for the A/V signal(e.g. as in paragraph [0041]); and recording the A/V signal to a storage medium(e.g. as in paragraph [0011]), which is compressed at the compression ratio(e.g. as in paragraph [0011]).

Independent claim 10 recites: A method of searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals(e.g. as in paragraph [0013]), comprising: displaying, when a user inputs a category item to be searched for through a graphic user interface(e.g. as in paragraph [0045]), a list of the one or more A/V signals falling under the category item among the one or more A/V signals stored in the storage medium(e.g. as in paragraph[0047]); and searching, when the A/V signal to be searched for is selected from the displayed list of one or more A/V signals(e.g. as in paragraph[0050]), the storage medium for the selected A/V signal(e.g. as in paragraph[0050]), wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. as in paragraph [0051].

Independent claim 11 recites: An apparatus for recording an audio/video (A/V) signal, comprising: a first storage medium storing one or more A/V signals(e.g. as in paragraph [0013]);a demultiplexing processor demultiplexing one of the input A/V signals(e.g. as in paragraph [0014]), extracting feature information in which a category of the input A/V signal is seized(e.g. as in paragraph [0014]), and transmitting the input A/V signal to the first storage medium(e.g. as in paragraph [0014]);a controller selecting and storing a category item for the input A/V signal based on the feature information provided from the demultiplexing processor and controlling the demultiplexing processor to record the input A/V signal to the first storage medium(e.g. as in paragraph [0014]); and a second storage medium storing category information including the category item(e.g. as in paragraph [0014]), wherein the controller determines a compression ratio for the input A/V signal according to the category item and provides information on the determined compression ratio to the demultiplexing processor(e.g. as in paragraph [0015]), and the demultiplexing processor compresses the input A/V signal at the compression ratio and transmits the compressed A/V signal to the first storage medium(e.g. as in paragraph [0015]).

Independent claim 18 recites: an apparatus for searching a first storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals(e.g. as in paragraph [0013]), comprising: an information input unit inputting information pertaining to a request of searching for the A/V signal stored in the first storage medium(e.g. as in paragraph [0016]);

a second storage medium storing category information including a category list of the one or more A/V signals stored in the first storage medium(e.g. as in paragraph [0016]); a display unit displaying the category list(e.g. as in paragraph [0016]); and a controller reading the category list from the second storage medium and controlling the category list to be displayed on the display unit when the search request information is received from the information input unit(e.g. as in paragraph [0016]), and when the A/V signal falling under a particular category item is selected

from the displayed category list through the information input unit, reading the selected A/V signal from the first storage medium(e.g. as in paragraph [0016]), wherein the category information comprises a name of a program and a date and time when the program is received(e.g. as in paragraph [0030]).

Independent claim 19 recites: an apparatus for recording an audio/video (A/V) signal to a storage medium(e.g. as in paragraph [0013]), comprising: a selecting unit selecting a category item for the A/V signal(e.g. as in paragraph [00]; a storing unit storing category information about the A/V signal, the category information including the category item; and a recording unit recording the A/V signal to the storage medium(e.g. as in paragraph [00, wherein the recording unit comprises a determining unit determining a compression ratio for the A/V signal according to the category item selected for the A/V signal, the recording unit recording the A/V signal, which is compressed at the compression ratio, to the storage medium(e.g. in paragraph [0051]).

Independent claim 26 recites: an apparatus for searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals,(e.g. as in paragraph [0013]) comprising: a display unit displaying, when a search for the A/V signal is requested, a category list of the one or more A/V signals stored in the storage medium(e.g. as in paragraph [0045]), and, when a category item to be searched for is selected from the displayed category list, a list of the A/V signals falling under the category item(e.g. as in paragraph [0047]); and a reading unit reading, when the A/V signal is selected from the list of A/V signals(e.g. as in paragraph [0048]), the selected A/V signal from the storage medium and displaying the selected A/V signal on the displaying unit, wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. as in paragraph [0051]).

Independent claim 27 recites: a method of searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals(e.g. as in paragraph [0013], comprising: displaying, when a search for the A/V signal is requested, a category item for at least one of the A/V signals stored in the storage medium and a list of at least one of the A/V signals falling under the category item(e.g. as in paragraph [0048]); and searching, when the A/V signal to be searched for is selected from the displayed category item and A/V signal list, the storage medium for the selected A/V signal, wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. in paragraph [0051]).

Independent claim 28 recites: an apparatus for searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals(e.g. in paragraph [0013]),

comprising: a display unit displaying, when a user inputs a category item to be searched for through a graphic user interface, a list of the one or more A/V signals falling under the category item among the one or more A/V signals stored in the storage medium(e.g. in paragraph [0013]); and a searching unit searching, when the A/V signal to be searched for is selected from the displayed list of one or more A/V signals, the storage medium for the selected A/V signal(e.g. in paragraph [0045]) wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. in paragraph [0051]).

Independent claim 29 recites a method comprising: extracting a category item from an audio/video (A/V) signal to be recorded to a storage medium(e.g. in paragraph [0010]); storing the extracted category item(e.g. in paragraph [0009]; and searching for the A/V signal using the category item(e.g. in paragraph [0047]), wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. in paragraph [0051]).

Independent claim 31 recites: an apparatus comprising: an extracting unit extracting a category item from an audio/video (A/V) signal to be recorded to a storage medium(e.g. in paragraph [0010]; a storing unit storing the extracted category item(e.g. in paragraph [0038]); and a searching unit searching for the A/V signal using the category item(e.g. in paragraph [0050]), wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium(e.g. in paragraph [0051]).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 CFR §41.37(c)(1)(vi))**

Grounds of rejection are

(a)claims 1-4, 10, 11, 13, 16-22, 26-29 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Corey et al (U.S. Patent No. 5,703,655) and Yogeshwar et al. (U.S. Patent Publication No. 2004/0096110 A1).

(b)claims 6,7, 24 and 25 rejected under 35 U.S.C § 103(a) as being unpatentable over Corey et al (U.S. Patent No. 5,703,655) and Yogeshwar et al. (U.S. Patent Publication No. 2004/0096110 A1) further in view of Jain et al.(U.S. Patent No. 6,360,234).

**VII. ARGUMENT (37 CFR § 41.37(c)(1)(vii))**

In the Final Office Action, the Examiner rejected claims 1-4, 10, 11, 13, 16-22, 26-29 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Corey et al. (U.S. Patent No. 5,703,655) and Yogeshwar et al. (U.S. Published No. 2004/0096110).

The Office Action acknowledges that that Corey et al. fail to disclose compression ratio for the compressed signal can be vary according to the category item selected for the A/V signal, for which the Office Action uses Yogeshwar et al.

Yogeshwar et al. sets forth a method for storing the compressed A/V signal can have different compression ratio according to the formats of the A/V signal (column 2, paragraph [0020], column 3, paragraph [0023]).

By way of review, Corey et al. sets forth a method and system for providing retrieval by content of video programming, and in particular, retrieval by content of relevant video segments embedded within longer video programs. (col. 1, lines 41- 46) As noted above, Corey et al. discloses how to retrieve programs using index data but does not relate to instructing how to determine compression ratio using category item.

Furthermore, an abstract of the Corey et al. sets forth that the present invention is a system and method for retrieving segments of stored video programs using closed caption text data. The closed caption text data is extracted from video programming signals received by the invention. Text records based on the extracted closed caption data are generated.

Accordingly, Corey et al. is an invention related to how to retrieve video program but does not related to how to determine compression rate using category item.

In addition, Corey et al. merely states: "further note that a closed caption storage device 72 for storing the above mentioned index records is also creates various index records which the control module 60" (col. 4, lines 31-34), and thus fails to disclose "storing category information the A/V signal, the category information including the category item" as recited in claim 1.

Further, Yogeshwar et al. sets forth that "captured data content is catalogued and indexed at or subsequent to the creation of an IAF file that includes the archived, e.g., encoded, information. The IAF includes a family of audio-video digital based on public standards, e.g., MPEG (MPEG-1, MPEG-2, MPEG-4, etc.) JPEG, DV, etc. For each encoding format multiple encoding profiles and/or levels may be supported with different profiles and/or levels may be supported with different profiles/levels corresponding to different image and/or audio file quality levels." (page 2, paragraph [0020]).

More specifically, Yogeshwar et al. discloses "for each encoding format which may be used, multiple encoding quality levels may be supported. For example, with regard to at least some

encoding formats a lossless or near-lossless encoding quality level is supported, a contribution quality level is supported and a distribution quality level is supported. At the near-lossless quality level, the quality after decoding encoded data will differ from the input by not more than a small pre-selected amount. The contribution quality level provides a level of quality sufficient for production or post-production processing while distribution quality level corresponds to the quality level at which information is to be distributed to end users (page 2, paragraph [0023]).

Yogeshwar et al. sets forth “[a]rchival storage and retrieval of audio/video information is described. Audio and/or video information is digitized, compressed and stored in an intermediate archive format(IAF), which preserves the content at a high-enough quality for subsequent retrieval and conversion into various formats required at the time of use or distribution. A single capture operation is performed with ancillary metadata being added to facilitate subsequent searching, indexing and format conversion. Captured data content is catalogued and indexed at or subsequent to the creation of an IAF file that includes the archived information. The IAF includes a family of audio-video digital encoding formats based on public standards. The encoding formats used in any particular application is determined at encoding time from information provided by the archive system user. At encoding, the particular encoding scheme is selected to optimize a tradeoff between storage constraints and end use quality requirements (abstract)

Thus, there is no indication of captured data content data is used to determine compress ratio of data.

Accordingly, Yogeshwar et al. merely discloses a number of different kinds of format and for each encoding format multiple encoding profiles and/or levels may be supported with different profiles/levels corresponding to different image and/or audio file quality levels.

Thus, Yogeshwar et al. does not disclose or suggest how to determine a compression ratio and to store A/V signal using category item.

Again, Yogeshwar et al. fails to teach or suggest “determining a compression ratio for the A/V signal according to the category item selected for the A/V signal” as recited in claim 1(emphasis added).

Further, the Office Action sets forth that it would have been obvious for one ordinary skill in the art at the time the invention was made to compress the A/V signal to optimize a tradeoff between storage constraints and end use quality requirements and to use storage space efficiently (relying on Yogeshwar et al., paragraph [0024],[0025])

This portion of Yogeshwar et al. sets forth: “Prior to encoding, the particular encoding scheme is selected in accordance with the present invention to optimize a tradeoff between storage constraints if any are specified and end use quality level requirements. The encoding



quality level is also selected. In order to use storage space efficiently, in various embodiments the encoding quality level is selected to be an encoding quality level which will preserve the image at level of quality lower than the input level of quality but at least as high as the minimum level of image quality at which the image is to be preserved.”([0024],[0025])

However, it is unclear how the Examiner can interpret that this portion of Yogeshwar et al. to disclose or suggest “determining a compression ratio for the A/V signal according to the category item selected for A/V signal,” as recited in claim 1.

Briefly, though allowable or additional features as noted below, it is also respectfully submitted that the combination of Corey et al. and Yogeshwar et al. does not disclose or suggest the invention recited in claims 1, 10, 11, 19, 26-29, and 31.

In addition, claims 2 and 20 are deemed patentable due at least to their depending from claims 1 and 19, respectively, as well as for the additional recitations therein.

Regarding claims 3 and 21, Corey et al. specify the category information is stored in the storage medium together with the A/V signal (column 4, lines 36-38).

By way of review, Corey et al. sets forth “the control module 60 resides on the same hardware platform 44 as the compression/decompression module 36 and the storage devices 40 and 72 may be combined into a single storage device,” and accordingly fails to disclose the claimed “wherein the category information is stored in a memory medium together with an A/V signal” as recited in claim 3 and 21.

As such, it is respectfully submitted that the combination of Corey et al. and Yogeshwar et al. does not disclose or suggest the invention recited in claims 3 and 21.

In addition, claim 4 is also deemed patentable due at least to its depending from claim 1, as well as for the additional recitations therein.

Regarding claims 10 and 28, the Office Action acknowledges that Corey et al. fails to disclose teach the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal.

However, the Office Action sets forth that Yogeshwar et al. teaches “determining a compression ratio for the A/V signal is compressed at a compression ratio determined based on the category item selected for the A/V signal to optimize a tradeoff between storage constraints and end use quality requirements and to use storage space efficiently,”(relying on Yogeshwar et al., paragraph [0024], [0025])

By way of review, Yogeshwar et al. sets forth “[p]rior to encoding, the particular encoding scheme is selected in accordance with the present invention to optimize a tradeoff between storage constraints if any are specified and end use quality level requirements. The encoding

quality level is also selected. In order to use storage space efficiently, in various embodiments the encoding quality level is selected to be an encoding quality level which will preserve the image at level of quality lower than the input level of quality but at least as high as the minimum level of image quality at which the image is to be preserved.”([0024] and [0025])

As mentioned above, Yogeshwar et al. only discloses the particular encoding scheme is selected in accordance with the present invention to optimize a tradeoff between storage constraints if any are specified and end use quality level requirements. However, this discussion in Yogeshwar et al. does not mean the same as the claimed “wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium,” as recited in claim 10.

As such, it is respectfully submitted that the combination of Corey et al. and Yogeshwar et al. similarly does not disclose or suggest the invention recited in claims 10 and 28.

Regarding claim 11, the Office Action acknowledges that Corey et al. fails to teach the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal. To disclose this feature, the Examiner states that Yogeshwar et al. teaches determining a compression ratio for the A/V signal and the category item selected for the A/V signal (relying on paragraph [0020], and [0023])

By way of review, Yogeshwar et al. discloses: “captured data content is catalogued and indexed at or subsequent to the creation of an IAF file that includes the archived, e.g., encoded, information. The IAF includes a family of audio-video digital based on public standards, e.g., MPEG (MPEG-1, MPEG-2, MPEG-4, etc.) JPEG, DV, etc. For each encoding format multiple encoding profiles and/or levels may be supported with different profiles and/or levels may be supported with different profiles/levels corresponding to different image and/or audio file quality levels,”(page 2, paragraph [0020]). More specifically, Yogeshwar et al. states: “for each encoding format which may be used, multiple encoding quality levels may be supported. For example, with regard to at least some encoding formats a lossless or near-lossless encoding quality level is supported, a contribution quality level is supported and a distribution quality level is supported. At the near-lossless quality level, the quality after decoding encoded data will differ from the input by not more than a small pre-selected amount. The contribution quality level provides a level of quality sufficient for production or post-production processing while distribution quality level corresponds to the quality level at which information is to be distributed to end users,” (page 2, paragraph [0023]).

However, Yogeshwar et al. does not teach or suggest “wherein the controller determines a compression ratio for the input A/V signal according to the category item and provides information

on the determined compression ratio to the demultiplexing processor, and the demultiplexing processor compresses the input A/V signal at the compression ratio and transmits the compressed A/V signal to the first storage medium," as recited in claim 11.

As such, it is respectfully submitted that the combination of Corey et al. and Yogeshwar et al. does not teach or suggest the invention recited in claim 11.

Regarding claim 13, the Office Action sets forth that Corey et al. discloses the feature information extracted by the demultiplexing processor is system information (SI) contained in the input A/V signal (e.g. Abstract, figure 1, Receiver Tuner 24, column 4, lines 1-12, addition information: closed caption data).

By way of review, Corey et al. only states: "the baseband video output by the receiver-tuner 24 is also supplied, via signal channel 48, to a closed caption decoder 52 for decoding the closed caption data from the video signal. Note that in the United States, closed caption data is carried as digital data modulated into line 21 of the video baseband signal. This line is considered part of the vertical blanking interval of the video or TV signal. In the present embodiment, the closed caption decoder 52 is a model DE 152 Data Recovery Decoder III from EEG. This decoder outputs raw closed caption data either with text formatting control codes or with the closed caption data formatted according to the control codes,"(col. 4, lines 1-12).

Accordingly, though Corey et al. may discuss closed caption data, Corey et al. fails to disclose "wherein the feature information extracted by the demultiplexing processor is system information (SI) contained in the input A/V signal, or additional information received together with the input A/V signal" as recited in claim 13.

As such, it is respectfully submitted that the combination of Corey et al. and Yogeshwar et al. does not teach or suggest the invention recited in claim 13.

Regarding claim 16, the Office Action indicates that Corey et al. sets forth the additional information is used when the input A/V signal is an analog signal (relying on column 3, line 53-55), signal coming in is digitized. Therefore, the A/V signal must be analog signal)

By way of review, Corey et al. only discloses "once the receiver-tuner 24 has converted the video signal into its baseband audio and video signals, these two signals are supplied, via signal channels 28 and 32 respectively, to a compression/decompression module 36 for digitizing and compression the signals, and subsequently storing the resulting representations on video/audio storage device 40 (col. 3. lines 51-56), which means that Corey et al. fails to disclose "wherein the additional information received together with the input A/V signal is an analog signal," as recited in claim 16.

As such, it is respectfully submitted that the combination of Corey et al. and Yogeshwar et

al. does not teach or suggest the invention recited in claim 16.

In addition, claim 17 is also deemed to patentable due at least to its depending from claim 16, as well as for the additional recitations therein.

Further, it is respectfully submitted that claims 18, 19, 22, and 26-29, and 31 are deemed patentable due at least to the same reasons as claim 11, as well as for the additional recitations therein.

Regarding claim 6, the Office Action further sets forth that Jain et al. discloses "the user interaction for adding and categorizing the A/V signal," (relying on the abstract, column 6, line 48-67).

By way of review, Jain et al. only sets forth: "unique metadata can be defined and added to the Video cataloger 110 by a user. Custom metadata tracks could include information provided in collateral data to the video information," (col. 6, lines 61-64). Thus, though Jain et al. may state "unique metadata can be defined and added to the Video cataloger 110 by a user. Custom metadata tracks could include information provided in collateral data to the video information," this reference is not relied on and does not cure the above noted deficiencies of Corey et al.

Therefore, it is respectfully submitted that neither Corey et al. nor Jain et al., either, alone or in combination, teach or suggest "determining a compression ratio for the A/V signal according to the category item selected for the A/V signal; and recording the A/V signal to a storage medium; which is compressed at the compression ratio," of claim 6.

In addition, claims 7, 24, and 25 are deemed patentable due at least to the same reasons of claim 6, as well as for the further recitations thereof.

Further, claims 13-17, depending from claim 11, are also deemed patentable due at least to their depending from claim 11, as well as for the additional features recited therein.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al. (U.S. Patent No. 5,703,655) and Yogeshwar et al. (U.S. Patent Application No. 2004/0096110 A1), as applied to claims 1-4, 10, 11, 13, 16, 17, 19, 20, 21, 22, 26, 27, 28, 29, 31 above, and further in view of Thomas et al. (U.S. Patent No. 6, 847,395 B2).

Regarding claims 14 and 15, the Office Action acknowledges that Corey et al. fails to disclose the system information for digital broadcasting. However, the Office Action sets forth that Tomas et al., citing the recitation: "system information (SI), wherein the SI is used when the A/V signal is a digital signal (e.g. abstract)... or Out-Of-Band."

However, Thomas et al. only sets forth Extended Text Tables and thus fails to disclose "extended channel name descriptor information," as recited in claim 14.

Accordingly, it is respectfully submitted that the combination of Corey et al. and Tomas et al.

does not disclose or suggest the invention recited in claim 14.

In addition, claim 15 is deemed to patentable due at least the same or similar reasons of claim 13, as well as for the additional features recited therein.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al. (U.S. Patent No. 5,703,655) and Yogeshwar et al. (U.S. Patent Application No. 2004/0096110 A1), as applied to claims 1-4, 10, 11, 13, 16, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 31 above, and further in view of Strubbe et al.(U.S. Patent No. 5,483,278).

The Office Action acknowledges that Corey et al. and Yogeshwar et al. fails to teach the category item comprises any one of drama and documentary. The Office Action further relies on Strubbe et al to set forth a category item that includes any one of drama and documentary, relying on column 4, lines 30-39.

By way of review, Strubbe et al. only sets forth in a fast data channel, data including the DOP can be provided in the form of packets comprising A/V data in compressed form. The DOP can comprise audio and full motion video display of "clips" of each offered program selection, as well as text summary descriptions of each selection which would comprise information about the plot features stars, category (comedy, drama, musical etc.) and critic's review information,(see col. 4, lines 30-39).

Although Strubbe et al. recites the term "category", this use of "category" is not cited for and does not cure the above noted deficiencies of Corey et al. and Yogeshwar et al. Therefore it is respectfully submitted that neither Corey et al. and Yogeshwar et al. nor Strubbe et al., either alone or in combination, teach or suggest how to combine the invention in claim 33.

Therefore, for at least the above, it is respectfully submitted that claims 1-4, 6-7, 10-11, 13-22, 24-29, and 31 are patentably distinguishable over any combination of Corey et al., Yogeshwar et al., Jain et al., and/or Tomas et al. Withdrawal of these rejections are respectfully requested.

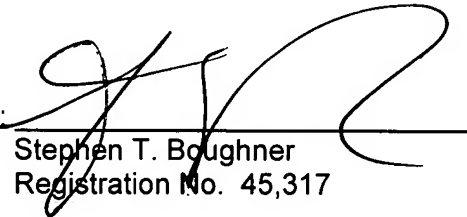
**VIII. CONCLUSION**

It is submitted that claims 1-4, 6, 7, 10, 11, 13-22, 24-29, 31 and 33 patentably distinguish over the cited references. Accordingly, reversal of the Examiner's rejection is respectfully requested.

Respectfully submitted,

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**IX. CLAIMS APPENDIX (37 CFR § 41.37(c)(1)(viii))**

1. (PREVIOUSLY PRESENTED) A method of recording an audio/video (A/V) signal, comprising:
  - selecting a category item for the A/V signal;
  - storing category information about the A/V signal, the category information including the category item;
  - determining a compression ratio for the A/V signal according to the category item selected for the A/V signal; and
  - recording the A/V signal to a storage medium, which is compressed at the compression ratio.
2. (ORIGINAL) The method of claim 1, wherein the category information is stored in a memory provided separately from the storage medium.
3. (ORIGINAL) The method of claim 1, wherein the category information is stored in the storage medium together with the A/V signal.
4. (ORIGINAL) The method of claim 1, wherein the category item selecting, comprises :
  - extracting feature information in which a category of the A/V signal is seized;
  - comparing the feature information with a predetermined category list; and
  - selecting the category item for the A/V signal based on a result of the comparison.
5. (CANCELED)
6. (ORIGINAL) The method of claim 1, wherein the category item is selected by a user.
7. (ORIGINAL) The method of claim 1, further comprising:
  - allowing a user to add a category item.
- 8-9. (CANCELED)

10. (PREVIOUSLY PRESENTED) A method of searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals, comprising:

- displaying, when a user inputs a category item to be searched for through a graphic user interface, a list of the one or more A/V signals falling under the category item among the one or more A/V signals stored in the storage medium; and
- searching, when the A/V signal to be searched for is selected from the displayed list of one or more A/V signals, the storage medium for the selected A/V signal,

wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.

11. (PREVIOUSLY PRESENTED) An apparatus for recording an audio/video (A/V) signal, comprising:

- a first storage medium storing one or more A/V signals;
- a demultiplexing processor demultiplexing one of the input A/V signals, extracting feature information in which a category of the input A/V signal is seized, and transmitting the input A/V signal to the first storage medium;
- a controller selecting and storing a category item for the input A/V signal based on the feature information provided from the demultiplexing processor and controlling the demultiplexing processor to record the input A/V signal to the first storage medium; and
- a second storage medium storing category information including the category item,

wherein the controller determines a compression ratio for the input A/V signal according to the category item and provides information on the determined compression ratio to the demultiplexing processor, and the demultiplexing processor compresses the input A/V signal at the compression ratio and transmits the compressed A/V signal to the first storage medium.

12. (CANCELED)

13. (ORIGINAL) An apparatus of claim 11, wherein the feature information extracted by the demultiplexing processor is system information (SI) contained in the input A/V signal, or additional information received together with the input A/V signal.

14. (ORIGINAL) An apparatus of claim 13, wherein the SI comprises extended text table (ETT) information, extended channel name descriptor (ECND) information, and network text



table information provided from a Program and System Information Protocol (PSIP) or Out-Of-Band System Information (OOBSI).

15. (ORIGINAL) An apparatus of claim 13, wherein the SI is used when the input A/V signal is a digital signal.

16. (ORIGINAL) An apparatus of claim 13, wherein the additional information is used when the input A/V signal is an analog signal.

17. (ORIGINAL) An apparatus of claim 13, wherein the additional information received together with the input A/V signal, is received through the same channel or a different channel than the input A/V signal.

18. (PREVIOUSLY PRESENTED) An apparatus for searching a first storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals, comprising:

an information input unit inputting information pertaining to a request of searching for the A/V signal stored in the first storage medium;

a second storage medium storing category information including a category list of the one or more A/V signals stored in the first storage medium;

a display unit displaying the category list; and

a controller reading the category list from the second storage medium and controlling the category list to be displayed on the display unit when the search request information is received from the information input unit, and when the A/V signal falling under a particular category item is selected from the displayed category list through the information input unit, reading the selected A/V signal from the first storage medium,

wherein the category information comprises a name of a program and a date and time when the program is received.

19. (PREVIOUSLY PRESENTED) An apparatus for recording an audio/video (A/V) signal to a storage medium, comprising:

a selecting unit selecting a category item for the A/V signal;

a storing unit storing category information about the A/V signal, the category information including the category item; and

a recording unit recording the A/V signal to the storage medium,

wherein the recording unit comprises a determining unit determining a compression ratio for the A/V signal according to the category item selected for the A/V signal, the recording unit recording the A/V signal, which is compressed at the compression ratio, to the storage medium.

20. (ORIGINAL) An apparatus according to claim 19, wherein the category information is stored in a memory provided separately from the storage medium.

21. (ORIGINAL) An apparatus according to claim 19, wherein the category information is stored in the storage medium together with the A/V signal.

22. (ORIGINAL) An apparatus according to claim 19, wherein the selective unit comprises:

an extracting unit extracting feature information in which a category of the A/V signal is seized; and

a comparing unit comparing the feature information with a predetermined category list, wherein the selecting unit selects the category item for the A/V signal based on a result of the comparison.

23. (CANCELED)

24. (ORIGINAL) An apparatus according to claim 19, wherein the category item is selected by a user.

25. (ORIGINAL) An apparatus according to claim 19, further comprising:  
an input unit to enable a user to add a category item.

26. (PREVIOUSLY PRESENTED) An apparatus for searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals, comprising:  
a display unit displaying, when a search for the A/V signal is requested, a category list of the one or more A/V signals stored in the storage medium, and, when a category item to be searched for is selected from the displayed category list, a list of the A/V signals falling under the category item; and

a reading unit reading, when the A/V signal is selected from the list of A/V signals, the selected A/V signal from the storage medium and displaying the selected A/V signal on the

displaying unit,

wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.

27. (PREVIOUSLY PRESENTED) A method of searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals, comprising:

displaying, when a search for the A/V signal is requested, a category item for at least one of the A/V signals stored in the storage medium and a list of at least one of the A/V signals falling under the category item; and

searching, when the A/V signal to be searched for is selected from the displayed category item and A/V signal list, the storage medium for the selected A/V signal,

wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.

28. (PREVIOUSLY PRESENTED) An apparatus for searching a storage medium, which stores one or more audio/video (A/V) signals, for one of the A/V signals, comprising:

a display unit displaying, when a user inputs a category item to be searched for through a graphic user interface, a list of the one or more A/V signals falling under the category item among the one or more A/V signals stored in the storage medium; and

a searching unit searching, when the A/V signal to be searched for is selected from the displayed list of one or more A/V signals, the storage medium for the selected A/V signal,

wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.

29. (PREVIOUSLY PRESENTED) A method comprising:

extracting a category item from an audio/video (A/V) signal to be recorded to a storage medium;

storing the extracted category item; and

searching for the A/V signal using the category item,

wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.

30. (CANCELED)

31. (PREVIOUSLY PRESENTED) An apparatus comprising:  
an extracting unit extracting a category item from an audio/video (A/V) signal to be recorded to a storage medium;  
a storing unit storing the extracted category item; and  
a searching unit searching for the A/V signal using the category item,  
wherein, the A/V signal is compressed at a compression ratio determined based on the category item of the A/V signal when recording the A/V signal to the storage medium.
32. (CANCELED)
33. (PREVIOUSLY PRESENTED) The method of claim 1, wherein the category item comprises any one of drama and documentary.

- X. EVIDENCE APPENDIX (37 CFR § 41.37(c)(1)(ix))**  
Not applicable.

**XI. RELATED PROCEEDINGS APPENDIX (37 CFR § 41.37(c)(1)(x))**

Not applicable.